

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Withdrawn) In an information handling system, a method for operating a first smart battery of a smart battery system, the smart battery system or an external power source being selected to provide electrical energy to at least one device of the information handling system, the method comprising:
 - initializing the first smart battery prior to the first smart battery being electrically coupled to the smart battery system, wherein the first smart battery includes a first smart electronics device, a first charge switch and a first discharge switch, wherein the first smart electronics operates the first charge and discharge switches to jointly control an operating condition of the first smart battery in response to receiving a control input, wherein the control input is received from a controller of the at least one device, the controller being electrically coupled to the first smart electronics, wherein the initializing includes the first smart electronics opening the first charge and discharge switches;
 - closing the first charge and discharge switches in response to the first smart electronics and the controller being in agreement to charge the first smart battery;
 - opening the first charge switch in response to either the first smart electronics or the controller directing the first charge switch to be opened; and
 - opening the first discharge switch in response to either the first smart electronics or the controller directing the first discharge switch to be opened.
2. (Withdrawn) The method of claim 1, wherein the smart battery system includes a second smart battery, wherein the second smart battery includes a second smart electronics device, a second charge switch and a second discharge switch, wherein the second smart electronics operates the second charge and discharge switches to jointly control an operating condition of the second smart battery in response to receiving the control input, the controller being electrically coupled to the second smart electronics.
3. (Withdrawn) The method of claim 2, comprising:

initializing the second smart battery prior to the second smart battery being electrically coupled to the smart battery system, wherein the initializing includes the second smart electronics opening the second charge and discharge switches;

closing the second charge and discharge switches in response to the second smart electronics and the controller being in agreement to charge the second smart battery;

opening the second charge switch in response to either the second smart electronics or the controller directing the second charge switch to be opened; and

opening the second discharge switch in response to either the second smart electronics or the controller directing the second discharge switch to be opened.

4. (Withdrawn) The method of claim 2, comprising:

switching the charge from the first smart battery to the second smart battery, wherein the switching includes:

opening the first charge switch while the first discharge switch remains closed;

closing the second discharge switch;

opening the first discharge switch; and

closing the second charge switch.

5. (Withdrawn) The method of claim 2, comprising:

switching the charge from the second smart battery to the first smart battery, wherein the switching includes:

opening the second charge switch while the second discharge switch remains closed;

closing the first discharge switch;

opening the second discharge switch; and

closing the first charge switch.

6. (Withdrawn) The method of claim 1, wherein the controller controls the selection of either the smart battery system or the external power source by controlling a battery power switch or a system power switch respectively.

7. (Withdrawn) The method of claim 6, wherein the system power switch is opened prior to a closing of the battery power switch in response to a removal of the external power source.
8. (Withdrawn) The method of claim 6, wherein the battery power switch is opened prior to a closing of the system power switch in response to receiving power from the external power source.
9. (Withdrawn) The method of claim 1, wherein the first and second smart electronics is electrically coupled to the controller by dedicated control lines.
10. (Withdrawn) The method of claim 1, wherein the first and second smart electronics is electrically coupled to the controller by a SMBus.
11. (Withdrawn) The method of claim 1, wherein the control input is generated by a BIOS program executing in the controller.
12. (Withdrawn) A power supply system for providing power to an information handling system device, the power supply system being connectable to an AC adapter for deriving power from an AC power source, the power supply system comprising:
 - a pair of smart batteries each capable of being individually selected to be operable, wherein each of the smart batteries includes:
 - a smart electronics device,
 - a charge switch, and
 - a discharge switch,
 - wherein each of the smart electronics operates the corresponding charge and discharge switches to control an operating condition of the smart battery,
 - wherein each of the smart electronics is operable to receive a control input from a controller included in the information handling system device to jointly control the operating condition,
 - wherein the charge and discharge switches of each of the smart batteries are operable to be closed in response to the corresponding

smart electronics and the controller being in agreement to charge the corresponding smart battery;

a battery charger operable to receive charge from the AC adapter and provide the charge to a selected one of the smart batteries; and

a power source selector operable to select either the smart batteries or the AC power source to provide the power to the device.

13. (Withdrawn) The power supply system of claim 12, wherein the charge switch of each of the smart batteries is operable to be opened in response to either the corresponding smart electronics or the controller directing the charge switch to be opened.
14. (Withdrawn) The power supply system of claim 12, wherein the discharge switch of each of the smart batteries is operable to be opened in response to either the corresponding smart electronics or the controller directing the discharge switch to be opened.
15. (Withdrawn) The power supply system of claim 12, wherein each of the smart batteries is initialized prior to being operable to receive the control input, wherein the initialization includes the smart electronics opening the corresponding charge and discharge switches.
16. (Withdrawn) The power supply system of claim 12, wherein the controller controls the power source selector by selecting either the smart batteries or the AC power source in response to an availability of the power from the AC power source.
17. (Currently Amended) An information handling system (IHS) comprising:
 - a processor;
 - a system bus;
 - a memory coupled to the processor through the system bus;
 - a power supply system operable to provide power to the processor, the bus and the memory, the power supply system being connectable to an AC adapter for deriving power from an AC power source;

a controller coupled to the processor and memory through the system bus, the controller operable to control the power supply system; and

wherein the power supply system includes:

a pair of smart batteries each capable of being individually selected to be operable, wherein each of the smart batteries includes:

an electronics device, each respective electronics device being coupled to the controller to jointly control charging and discharging of a rechargeable cell in the associated smart battery, each rechargeable cell being coupled in series to a charge switch and a discharge switch whereby, during a discharge operating condition, each respective electronics device monitors the energy level of its rechargeable cell, and when requested by the controller, provides energy to the IHS and notifies the controller when the energy level falls below a threshold level, and during a charge operating condition, each respective electronics device receives a charge and transfers the charge to its rechargeable cell, when required; and;

~~the charge and discharge switches being closed in response to the electronics device and the controller being in agreement to charge one of the smart batteries, and either of the charge or the discharge switches being opened in response to one of the electronics device and the controller directing either of the charge and discharge switches to be opened; and~~

a battery charger operable to receive charge from the AC adapter and provide the charge to a selected one of the smart batteries; and

a power source selector operable to select either the smart batteries or the AC power source.

18. (Previously Presented) The system of claim 17, wherein the charge switch of each of the smart batteries is operable to be opened in response to either the corresponding electronics device or the controller directing the charge switch to be opened.

19. (Previously Presented) The system of claim 17, wherein the discharge switch of each of the smart batteries is operable to be opened in response to either the corresponding electronics device or the controller directing the discharge switch to be opened.
20. (Previously Presented) The system of claim 17, wherein each of the smart batteries is initialized prior to being operable to receive the control input, wherein the initialization includes the electronics devices opening the corresponding charge and discharge switches.
21. (Previously Presented) The system of claim 17, wherein each of the electronics devices operates the corresponding charge and discharge switches to control an operating condition of the smart battery.
22. (Previously Presented) The system of claim 17, wherein each of the electronics devices is operable to receive a control input from the controller for jointly controlling the operating condition.
23. (Previously Presented) The system of claim 17, wherein the charge and discharge switches of each of the smart batteries are operable to be closed in response to the corresponding electronics device and the controller being in agreement to charge the corresponding smart battery.
24. (Currently Amended) An information handling system (IHS) comprising:
 - a processor;
 - a system bus;
 - a memory coupled to the processor through the system bus;
 - a power supply system operable to provide power to the processor, the bus and the memory, the power supply system being connectable to an AC adapter for deriving power from an AC power source;
 - a controller coupled to the processor and memory through the system bus, the controller operable to control the power supply system; and
 - wherein the power supply system includes:

a pair of batteries each capable of being individually selected to be operable, wherein each of the batteries includes:

an electronics device, each respective electronics device being coupled to the controller to jointly control charging and discharging of a rechargeable cell in the associated battery, each rechargeable cell being coupled in series to a charge switch and a discharge switch whereby, during a discharge operating condition, each respective electronics device monitors the energy level of its rechargeable cell, and when requested by the controller, provides energy to the IHS and notifies the controller when the energy level falls below a threshold level, and during a charge operating condition, each respective electronics device receives a charge and transfers the charge to its rechargeable cell, when required; and;

~~the charge and discharge switches being closed in response to the electronics device and the controller being in agreement to charge one of the smart batteries, and either of the charge or the discharge switches being opened in response to one of the electronics device and the controller directing either of the charge and discharge switches to be opened; and~~

a battery charger operable to receive charge from the AC adapter and provide the charge to a selected one of the batteries; and

a power source selector operable to select either the batteries or the AC power source.